

### **DETAILED ACTION**

1. The amendment filed 04/28/08 have been entered and made of record..

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Charles W. Bethards on August 12, 2008.

2. The application has been amended as follows:

#### **IN THE CLAIMS**

Claim 1, after line 20, please insert -- providing one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit within the neighborhood cell to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit; and at all subscriber units within the neighborhood cell, including the source mobile subscriber unit and the one or more last hop nodes, periodically probing a first set of mobile subscriber units in proximity thereto to collect ad hoc wireless network coverage information --;

CANCELED CLAIM 3;

Claim 4, line 1 replace " The method of claim 3" by -- A method of communicating in and around a localized wireless coverage area, comprising: defining a neighborhood cell by transmitting a localized wireless coverage area identifying signal from a neighborhood cell transmitter; establishing communication between a source mobile subscriber unit and a destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through wide area network coverage when the source mobile subscriber unit is outside of the neighborhood cell, receiving the localized wireless coverage area identifying signal and determining whether the source mobile subscriber unit is a subscriber on the neighborhood cell and if the source mobile subscriber unit is a subscriber, switching over to ad hoc wireless network coverage when the source mobile subscriber unit enters the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through the ad hoc wireless network coverage when the source mobile subscriber unit is within the neighborhood cell, switching over to the wide area wireless network coverage when the source mobile subscriber mobile unit exist the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; and providing one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit within the neighborhood cell to regulate data packet traffic

between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit --;

Claim 5, line 1, replace " The method of claim 3" by -- A method of communicating in and around a localized wireless coverage area, comprising: defining a neighborhood cell by transmitting a localized wireless coverage area identifying signal from a neighborhood cell transmitter; establishing communication between a source mobile subscriber unit and a destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through wide area network coverage when the source mobile subscriber unit is outside of the neighborhood cell, receiving the localized wireless coverage area identifying signal and determining whether the source mobile subscriber unit is a subscriber on the neighborhood cell and if the source mobile subscriber unit is a subscriber, switching over to ad hoc wireless network coverage when the source mobile subscriber unit enters the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through the ad hoc wireless network coverage when the source mobile subscriber unit is within the neighborhood cell, switching over to the wide area wireless network coverage when the source mobile subscriber mobile unit exist the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; and providing one or more last hop nodes within the neighborhood cell each comprised of a

mobile subscriber unit within the neighborhood cell to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit --;

CANCELED CLAIM 6;

Claim 7, replace "The method of claim 6" by -- The method of claim 1 --;

Claim 8, line 1, replace " The method of claim 3" by -- A method of communicating in and around a localized wireless coverage area, comprising: defining a neighborhood cell by transmitting a localized wireless coverage area identifying signal from a neighborhood cell transmitter; establishing communication between a source mobile subscriber unit and a destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through wide area network coverage when the source mobile subscriber unit is outside of the neighborhood cell, receiving the localized wireless coverage area identifying signal and determining whether the source mobile subscriber unit is a subscriber on the neighborhood cell and if the source mobile subscriber unit is a subscriber, switching over to ad hoc wireless network coverage when the source mobile subscriber unit enters the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through the ad hoc

wireless network coverage when the source mobile subscriber unit is within the neighborhood cell, switching over to the wide area wireless network coverage when the source mobile subscriber mobile unit exist the neighborhood cell to maintain the communication between the source mobile subscriber unit and the destination unit; and providing one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit within the neighborhood cell to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit --;

Claim 9, after line 12, insert – periodically probing a plurality of neighboring mobile subscriber units to collect ad hoc wireless network coverage information while within the neighborhood cell, wherein the periodically probing of a plurality of neighboring mobile subscriber units to collect ad hoc wireless network coverage information comprises: periodically probing of a plurality of neighboring mobile subscriber units to collect ad hoc wireless network coverage route and cost information, and wherein the establishing of the data packet route to the destination unit through wide area network coverage within the defined neighborhood cell is executed utilizing the ad hoc wireless network coverage route and cost information --;

CANCELED CLAIMS 13-14;

Claim 15, line 1, replace “The method of claim 14” by – The method of claim 9 --;

CANCELED CLAIMS 16-21;

***Allowable Subject Matter***

3. Claims 1-2, 4-5, 7-8, 9-12, 15 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 is allowed. Wu (Patent No.: US 7,171,206 B2) discloses defining a neighborhood cell by transmitting the list of transcoding proxies and related information from a neighborhood cell transmitter (figure 3, MAS 351) (col. 7, lines 19-20, the MAS 351 send the mobile device 104 the list of neighborhood proxies and related information); establishing communication between a source mobile subscriber unit (figure 3, mobile device 104) and a destination unit (col. 7, lines 28-30, the service area profile gives users the information of neighborhood transcoding proxies adjacent to the current serving transcoding proxy for the assistance of a handover operation) (col. 8, lines 4-6, lines 18-20, lines 25-27); if the establishing of communication between a source mobile subscriber unit (figure 3, mobile device 104) and destination unit (figure 3, Transcoding proxy 112) through wide area network coverage (col. 2, lines 6-7, GSM or UMTS) when the source mobile unit (figure 3, mobile unit 104) is outside of the neighborhood cell (col. 2, lines 6-7, Bluetooth), receiving the list of transcoding proxies and related information from a neighborhood cell transmitter and determining whether the source mobile subscriber unit is a subscriber on the neighborhood cell (col. 6, lines

65-67, col. 7, lines 1-2, lines 15-17, Authentication) on the neighborhood cell and if the source mobile subscriber unit is a subscriber, switching over to ad hoc wireless network coverage (col. 2, lines 6-7, Bluetooth) when the source mobile subscriber unit enters the neighborhood cell to maintain the communication (col. 2, lines 33-34, while maintain a communication session facilitated via a transcoding proxy) between the source mobile subscriber unit (figure 3, mobile device 104) and the destination unit.

Dehner et al. (U.S. Patent No. 6,882,677 B2) discloses defining a neighborhood cell by transmitting a localized wireless coverage area-identifying signal (see col. 8, lines 53-58) (see col. 1, lines 13-30, Wireless LANs (WLANs) such as Bluetooth, Home RF, 802.11, ...these networks are designed and constructed to provide adhoc wireless network....Essentially, in part to keep the networks simple and inexpensive, provisions for mobility management, such as handoff from one coverage area to another that may be considered and present in and associated with wide area networks (WLANs) such as cellular phone systems have not been included in WLAN) (see col. 4, lines 55-56); comprising: Establishing communication between a source mobile subscriber unit and a destination unit; if the establishing of communication between a source mobile subscriber unit and a destination unit is achieved through the ad hoc wireless network coverage (col. 1, lines 13-14, lines 27-28, handoff from wireless LANs (WLANs) such as Bluetooth) to another that may be considered and present in and associated with wide area networks (WANs) such as cellular phone system) when the source mobile subscriber unit is within the neighborhood cell (Bluetooth), switching over (handover) to

the wide area wireless network coverage (WANs) when the source mobile subscriber mobile unit exists the neighborhood cell (Bluetooth) to maintain the communication between the source mobile subscriber unit and the destination unit (col. 12, lines 35-36, operate to maintain any connections with outside services including queuing information intended for or any coming from the CU during the reestablishing of a connection) (col. 6, lines 40-45) (col. 1, lines 25-35, handoff from one coverage area (cellular phone or ad hoc) to another that may be considered and present in and associated with wide area networks (WANs) such as cellular phone systems have not been included in WLAN specification and systems....providing continuous service or WLAN access to user devices as they roam or more (handoff) through the coverage areas (cellular phone or ad hoc) of multiple network access points).

The prior art however fails to disclose providing one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit within the neighborhood cell to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit; and at all subscriber units within the neighborhood cell, including the source mobile subscriber unit and the one or more last hop nodes, periodically probing a first set of mobile subscriber units in proximity thereto to collect ad hoc wireless network coverage information;



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Claim 4 is allowed. The prior art however fails to disclose wherein the providing of one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit further comprises providing one or more stationary last hop nodes at fixed locations within the neighborhood cell each comprised of a mobile subscriber unit.

Claim 5 is allowed. The prior art however fails to disclose wherein the providing of one or more last hop nodes within the neighborhood cell each comprised of a mobile subscriber unit to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit further comprises providing one or more mobile last hop nodes each comprised of a mobile subscriber unit that dynamically defines the neighborhood cell.

Claim 8 is allowed. The prior art however fails to disclose wherein the providing one or more last hop nodes within the neighborhood cell to regulate data packet traffic between the source mobile subscriber unit and the destination unit during the communication between the source mobile subscriber unit and the destination unit further comprises providing one or more last hop nodes within the neighborhood cell to multiplex mobile

subscriber unit data packets onto a single channel for transmission to a wide area network.

Claim 9 is allowed. The prior art however fails to disclose periodically probing of a plurality of neighboring mobile subscriber units to collect ad hoc wireless network coverage route and cost information, and wherein the establishing of the data packet route to the destination unit through wide area network coverage within the defined neighborhood cell is executed utilizing the ad hoc wireless network coverage route and cost information.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EDAN ORGAD can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/12/08

/Edan Orgad/  
Supervisory Patent Examiner, Art Unit 2619